

With the present invention, a delay time in relay from a point of time when a header of specific information arrives at a slave-side port in the multiplexer under a point of time when the header of the specific information is outputted from the master-side port is always equal to a sum of a specific constant time and other constant processing delay time (such as a time for passing through a transfer path terminating circuit or the like), so that fluctuation in a delay time in relay due to queuing does not occur. With this feature, fluctuation of a delay time in transferring specific information from the slave device to the master device due to queuing can be eliminated.

A1
Please replace the second paragraph on page 32 with the following

Namely, the polled slave device 7 transmits a specific information for starting the sampling time matching to the master device 6 according to the local sampling time, and the master device 6 having received the specific packet returns a specific packet to the slave device 7 according to the local sampling time. Further, the slave device 7 having received the specific packet returned from the master device computes ΔT , and adjusts the sampling time and the sampling number (Refer to description of the communication network based on the conventional network).

Please replace the first paragraph on page 34 with the following:

When the identification bit indicates a general packet, then the general packet is once stored in the master-destined general packet buffer 21 provided to the slave-side port 12, and when the identification bit indicates a specific packet, then the specific packet is once stored in the master-destined specific packet buffer 22. Each of these buffers transmit the packet received from the master-side port 11 via the packet multiplexing bus 24 after getting a permissions from the master-destined buffer selection circuit 25.

A3

Please replace the first full paragraph on page 79 with the following:

Accordingly, in this embodiment, like in Embodiment 8, even when each second master device 44 collects sampling information from the slave devices 7 outside the local small-scale network as well as from the slave devices 7 outside the local small-scale network, precision of sampling time in the third master device 54 and that in each slave device 7 can be improved. Further, in the communication network according to this embodiment, a number of devices and a number of transfer paths can be reduced as compared to those in the communication network according to Embodiment 8.

A4

Please replace the second paragraph on page 81 with the following:

With the present invention, a delay time in relay from a point of time when a header of specific information arrives at a slave-side port in the multiplexer under a point of time when the header of the specific information is outputted from the master-side port is always equal to a sum of a specific constant time and other constant processing delay time (such as a time for passing through a transfer path terminating circuit or the like), and there occurs no fluctuation in a delay time in relay due to queuing. with this feature, there is provided the advantage that fluctuation of a delay time in transferring specific information from the slave device to the master device due to queuing can be eliminated.

AS

IN THE CLAIMS:

Please replace claims 1-4, 9, 10, 13, 15-19 and 22 with the following:

sub B2
Claim 1. (Amended)

A communication network comprising:

a master device and a plurality of slave devices connected to each other

through at least one multiplexer in a tree configuration with the master device at the vertex for transmitting and receiving various types of specific information

AB